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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,883

06/08/2006

Thomas Nosker

P26,788-A USA

7021

29880

7590

12/31/2008

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EXAMINER

TISCHLER, FRANCES

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

12/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,883	Applicant(s) NOSKER ET AL.	
	Examiner FRANCES TISCHLER	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/27/06, 3/7/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1 – 8 and 17 - 20, drawn to a plastic structural composite comprising a web section and at least one flange section.

Group II, claim(s) 9 – 11 and 17 - 20, drawn to a plastic structural composite comprising a grooved side and a tongue-forming side that interlock.

Group III, claim(s) 12 - 16, drawn to a bridge constructed from a plurality of pier-supported parallel rows of I-beams of two sizes that nest within each other.

The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Applicant's claims lack inventive step as disclosed by Nosker et al (US 5,789,477) in view of Marinelli (US 6,247,651) who teach the structural composite claimed by Applicant and beams with web and flange sections as claimed by Applicant.

During a telephone conversation with Sarah Klosek on 12/23/08 a provisional election was made without traverse to prosecute the invention of Group I, claims 1 – 8

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and 17 - 20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9 – 16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant claims a composite comprising (A) a polyolefin and (B) a thermoplastic-coated fiber material, polystyrene, or a combination thereof. It is not clear how the combination of a polyolefin with only a polystyrene (i.e. without a fiber) can result in the composite claimed which can be used as the high-stress structural material claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 – 8 and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nosker et al (US 5,789,477) in view of Marinelli (US 6,247,651).

Nosker discloses (abstract, 2:10 – 17, 3:19 – 20, 4:2 – 7, 4:64 - 66) a structural composite formed from a mixture of high density polyolefin and a thermoplastic-coated fiber material useful in high stress applications such as railroad ties, dimensional lumber, poles, guard rail posts, pier, boardwalk, etc. The polyolefin used is high density polyethylene (HDPE). The coated fibers are coated with PP, PE, polystyrene, HDPE, etc. The fibers comprise carbon fibers, fiberglass, or mixtures thereof.

The composite material contains 50 – 75% of the polymer component by weight based on the weight of the finished composite material (5:24 – 36), reading on

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Applicant's about 20 to about 90%. Since 50 – 75% is polymer, the remainder, or 25 – 50%, comprises the thermoplastic coated fibers, reading on Applicant's 10 – 80%. The polymer component comprises ([4:7 – 29]) between about 80% to about 100% HDPE, reading on Applicant's from about 50% to about 80% high density polyolefin comprising at least 75% HDPE, and 20% polystyrene reading on Applicant from about 20 to about 50% polystyrene component containing at least about 90% polystyrene.

Nosker discloses ([3:19 – 31, 6:52 – 64, Table 2) a compressive modulus of at least 170,000 psi and more preferably of 250,000 psi, reading on Applicant's compression modulus of at least 170,000 psi, and a compression strength of 3,600 – 3,900 psi, reading on Applicant's compression strength of at least 2,500 psi.

The prior art thus fully discloses Applicant's composition.

Nosker discloses a railroad tie produced with dimensions of 7"X9"X10', which is the typical dimensions of a tie, but is silent on the specifics of the tie such as construction of an I-beam shape with its web and flange sections.

Marinelli discloses (abstract, 2:14 – 50, claim 1, Figure) a composite railway tie shaped as an I-beam. The composite is made of 65% HDPE, 20% rubber tires and 15% fiberglass. The tie is made in the form of an I-beam with flange sections with an interconnecting web section. Marinelli also discloses a smaller width dimension of the web in comparison to the flange.

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It would have been obvious to one of ordinary skill in the art to have made an I-beam of Nosker's' railroad tie as disclosed by Marinelli since both inventors disclose similar composite material shaped to be used as railroad ties.

The width and thickness ratio between the flange and the web can be compared to standard railroad ties and optimized through routine experimentation using Nosker's composite and Marinelli's disclosure of width differences to arrive at the desired results of ties that fit the required dimensions, compressive modulus and strength that is necessary for the railroad.

It would also have been obvious to one of ordinary skill in the art to have used Nosker's composite to make articles of certain shapes such as a C-beam or T-beam since Marinelli discloses that an I-beam shape can be made and said shapes are simple variations of one another.

Prior Art Cited But Not Applied

Any prior art reference which is cited on Form PTO-892 but not applied is cited to show the general state of the art at the time of applicant's invention. Said references teach railroad tie made of composites.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANCES TISCHLER whose telephone number is

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(571)270-5458. The examiner can normally be reached on Monday-Friday 7:30AM - 5:00 PM; off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Frances Tischler
Examiner
Art Unit 1796

/FT/